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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/541,687

11/21/2005

Sam A. Deadwyler

C21-074US

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28156 7590 05/13/2010
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EXAMINER

KIM, JENNIFER M

ART UNIT

PAPER NUMBER

1628

MAIL DATE

DELIVERY MODE

05/13/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/541,687	Applicant(s) DEADWYLER ET AL.	
	Examiner JENNIFER M. KIM	Art Unit 1628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 February 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-3, 14-19, 35 and 36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 14-19, 35 and 36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The amendment filed February 16, 2010 have been received and entered into the application.

It is noted that the claims have been examine to the extent of Applicants' elected species of the AMPA receptor potentiator: **1-(benzofuranzan-5-ylcarbonyl)morpholine (BCM)**.

Response to Arguments

Applicant's arguments filed February 16, 2010 have been fully considered but they are not persuasive. Applicant argues that one skilled in the art would not find it obvious that the instant drug would necessarily function to benefit cognitive performance is different brain regions are activated for performance of the task as described in page 31 and 32 of the application. This is not found persuasive because the pages 31 and 32 of the instant application have been carefully considered and reviewed, however, the result reported on Table 2, is an expected result next to the teaching of the cited prior art, Rogers et al (U.S.Patent No. 6,313,115B1) who teach that the compounds having AMPA receptor enhancing properties, i.e. **4-benzofurazan-5-ylcarbonyl)morpholine**, are useful for alleviating impairment of memory or other cognitive functions and that AMPA rectors mediate transmission in the brain networks responsible for a host of cognitive activities as well known. It teaches that drugs that

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enhance the functioning of AMPA receptors have significant benefits for intellectual performances and facilitate memory encoding. (column 1, lines 35-60, Example 9, column 6, lines 62-66, column 10, lines 45-49, column 22, claims 17 and 21). In this case it would have been obvious to one of ordinary skill in the art to employ **4-benzofurazan-5-ylcarbonyl)morpholine** known to have AMPA receptor enhancing property in the treatment of cognitive disorder or impairment of memory functions at any cause including acute or chronic sleep deprivation because Rogers et al. teach that the composition comprising **4-benzofurazan-5-ylcarbonyl)morpholine** is effective for the treatment of impairment in memory or other cognitive functions in general particularly for the subject population of humans and animals.

In view of the above Office Action of 10/13/2009 is deemed proper and asserted with full force and effect herein to obviate applicant's claims.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-3, 14-19, 35 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rogers et al. (U.S. Patent No. 6,313,115 B1).

Rogers et al. teach Applicants elected compound, **4-benzofurazan-5-ylcarbonyl)morpholine**, useful for the alleviating **impairment of memory or other**

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cognitive functions, brought on by a deficiency in the number or strength of excitatory synapses or in the number of AMPA receptors. (see Example 9, column 6, lines 62-66, column 10, lines 45-49, column 22, claims 17 and 21). Rogers et al. teach that the treatment can be also used in humans, domesticated animals and laboratory animals. (column 10, lines 55-65).

Rogers et al. do not expressly teach the acute or chronic sleep deprivation as a cause of the cognitive impairment and the specified patient populations set forth in claims 16-19.

It would have been obvious to one of ordinary skill in the art to employ 4-benzofurazan-5-ylcarbonylmorpholine in the treatment of cognitive disorder or impairment of memory functions at any cause including acute or chronic sleep deprivation because Rogers et al. teach that the composition comprising 4-benzofurazan-5-ylcarbonylmorpholine is useful for the treatment of impairment in memory or other cognitive functions in general particularly for the subject population of humans and animals. With regard to the administration of the compound for the treatment of cognition impairment to the specific patient population set forth in claims 16-19, such is obvious because the instant compound to be utilized is disclosed by Rogers et al having therapeutic use in the treatment of memory impairment and other cognitive disorder, it would have been obvious to one of ordinary skill in the art to this utility would be retained upon the administration of the compound to any subject populations in humans and animals.

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For these reasons the claimed subject matter is deemed to fail to patentably distinguish over the state of the art as represented by the cited references. The claims are therefore properly rejected under 35 U.S.C. 103.

None of the claims are allowed.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JENNIFER M. KIM whose telephone number is (571)272-0628. The examiner can normally be reached on Monday through Friday 6:30 am to 3 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sreenivasan Padmanabhan can be reached on 571-272-0629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JENNIFER M KIM/
Primary Examiner, Art Unit 1628

Jmk
May 11, 2010